# East (Gippsland) Region

# Emergency Response Plan - Tsunami Complementary Plan

SES

Safer Communities - Together

## Published by Victoria State Emergency Service

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This publication is intended to be consistent with the State Emergency Management Plan (SEMP), published by Emergency Management Victoria in 2020.

**Authorised by the Victoria State Emergency Service**
**168 Sturt Street, Southbank, Victoria 3006**

An electronic version of the plan can be obtained at: www.ses.vic.gov.au/about-us/state-and-regional-emergency-plans

## Foreword

This plan was developed as an emergency response plan prior to introduction the of the **State Emergency Management Plan (SEMP)** in 2020 *under Emergency Management Legislation Amendment Act 2018* (EMLA Act 2018) and therefore constitutes a Complementary Plan to **the Regional Emergency Management Plan (REMP).** In time, this plan will be reviewed and transition to being a form Sub-Plan under the **Regional Emergency Management Plan (REMP**) in accordance with the EMLA Act 2018 and with regard to the Emergency Management Planning Legislative Guidelines by 2023.

The Victoria State Emergency Service (VICSES) East Region led the preparation of this **Emergency Response Plan - Tsunami Complementary Plan (this plan)** in consultation with other agencies represented on the REMPC.

This plan replaces the **East (Gippsland) Region Tsunami Emergency Response Plan 2016** and is published to support any immediate operational response.

The plan includes provision of current and accurate information relating to:

- Any VICSES changes in organisation, agency roles and responsibilities.
- Evolution of the sector in relation to multi-agency and cross border arrangements.
- Alignment with arrangements contained in the State Tsunami Sub-plan.

**Version Control**
East (Gippsland) Region
Emergency Response Plan – Tsunami Complementary Plan
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# East (Gippsland) Region Emergency Response Plan – Tsunami Complementary Plan Certification

The East (Gippsland) Region Emergency Response Plan – Tsunami Complementary Plan deals with response to tsunami incidents within East (Gippsland) area of responsibility.

The following plan is intended to provide the framework for East (Gippsland) Region to effectively and efficiently respond to future emergencies caused by tsunami, and will remain current until rescinded by authority of the Victoria State Emergency Service Chief Officer Operations.

Date: 22 April 2022

**Tim Wiebusch**
*Chief Officer Operations*

This plan is produced by Victoria State Emergency Service and has been adapted from the **State Emergency Response Plan – Tsunami Sub-plan**. All information contained in this plan was current at time of publication.

The Victoria State Emergency Service would like to acknowledge the significant contribution of key stakeholders to ensure the content contained within this plan is of a high quality to support response activities.

For further details about this plan, please contact East (Gippsland) Region:

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## State Emergency Management Priorities

The State Emergency Management Priorities are:

- Protection and preservation of life is paramount. This includes:
  - Safety of emergency response personnel
  - Safety of community members including vulnerable community members and visitors/tourists
- Issuing of community information and community warnings detailing incident information that is timely, relevant and tailored to assist community members make informed decisions about their safety
- Protection of critical infrastructure and community assets that support community resilience
- Protection of residential property as a place of primary residence
- Protection of assets supporting individual livelihoods and economic production that supports individual and community financial sustainability
- Protection of environmental and conservation assets that considers the cultural, biodiversity, and social values of the environment.

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# 1. Introduction

## 1.1 Purpose

The purpose of this plan is to provide strategic guidance for the effective emergency management of a tsunami event in East (Gippsland) Region.

## 1.2 Objective

The objective of East (Gippsland) Region Emergency Region Response Plan – Tsunami Complementary Plan is to outline the regional arrangements to ensure an integrated and coordinated approach to the management of tsunami events in East (Gippsland) Region, in order to reduce the impact and consequences of these events on the community, infrastructure and services.

## 1.3 Scope

This East (Gippsland) Region Emergency Region Response Plan – Tsunami Complementary Plan includes:

- Description of potential risks and consequences of tsunami to the social, built, economic and natural environments
- Region specific emergency management arrangements for the management of tsunami
- Links to sources of information where the reader can obtain further detail.

## 1.4 Authorising Environment

The *Emergency Management Act* (1986 and 2013) and the *Emergency Management Legislation Amendment Act 2018* (EMLA Act 2018) is the empowering legislation for the management of emergencies in Victoria.

The **State Emergency Management Plan (SEMP)** contains policy and planning documents for emergency management in Victoria and provides details about the roles different organisations play in the emergency management arrangements.

The SEMP also identifies Victoria's organisational arrangements for managing the response to emergencies as outlined in the Roles and Responsibilities Section.

The East (Gippsland) Region Emergency Response Plan (yet to be developed) will detail specific arrangements for the management of emergencies within the East (Gippsland) Region. This plan has been developed as a subordinate plan of the East (Gippsland) Region Emergency Response Plan and the **State Emergency Response Plan – Tsunami Complementary Plan**. This plan has been shared with the Regional Emergency Management Committee for comment, and approved by the VICSES Chief Officer Operations.

Other relevant legislation includes:

- *Victoria State Emergency Service Act 2005*
- *Essential Services Act 1958*
- *Planning and Environment Act 1989*
- *Local Government Act 1989*

## 1.5 Activation of the Plan

The arrangements in this plan apply on a continuing basis and do not require activation.

## 1.6 Audience

The audience for this plan comprises the Victorian Government and agencies within the emergency management sector, including business and community groups with a significant role in the management of the emergency.

Although the wider community is not the primary audience, community members may find the contents of this plan informative.

## 1.7 Linkages

This plan is a Complementary Plan of the State Emergency Response Plan – Tsunami Sub-plan and the East (Gippsland) Region Emergency Response Plan (yet to be developed). It reflects legislation, the arrangements in the State Emergency Response Plan, the strategic direction for emergency management in Victoria and the accepted State practice for managing emergencies.

It is likely that tsunami events will include impacts of flash flooding and storm surge for areas prone to coastal flooding. For arrangements for the management of flooding, refer to the State Emergency Response Plan – Flood Sub-plan and East (Gippsland) Region – Flood Sub-plan at www.ses.vic.gov.au.

Arrangements in this plan have not been repeated from afore mentioned plans, unless necessary to ensure context and readability. The Victoria State Emergency Response Plan – Tsunami Complementary Plan can be accessed at www.ses.vic.gov.au.

Arrangements for the management of secondary consequences are contained in the following:

- For health response – **State Health Emergency Response Plan (SHERP).**
- For rescue – the **Victorian Urban Search and Rescue Response Arrangements (USAR).**
- Flood response – **State Emergency Response Plan Flood Sub-plan and East (Gippsland) Region Emergency Response Plan – Flood Sub-plan.**

## 1.8 Exercising and Evaluation

This plan will be exercised within one year from the date of approval and once every three years thereafter as part of a phased cycle. A Region Tsunami Scenario has been created to support this function available in Attachment 1 – Region Tsunami Scenario. Exercises will be evaluated and, where improvements to the emergency management arrangements in this plan are required, the plan will be amended and a revised version issued. Exercises will be conducted in accordance with the State Exercising Framework.

Any operational activity East (Gippsland) Region requiring the management of a tsunami event will be regarded as exercising of the plan. The event is to be evaluated and reviewed, as outlined above.

## 1.9 Review

This plan was current at the time of publication and remains in effect until modified, superseded or withdrawn.

This plan will be reviewed and updated every three years. Consideration will be given to an earlier revision if the plan has been applied in a major emergency or exercise, or following a substantial change to the relevant legislation or arrangements.

# 2. The Tsunami Risk within the East (Gippsland) Region

## 2.1 Region Description

Gippsland is a rural region of Victoria located in the south-eastern part of the state. It covers an area of 41,556[1] square kilometres and lies to the east of Melbourne. Gippsland is comprised of seven municipalities being Baw Baw, Bass Coast, South Gippsland, Wellington, East Gippsland, Latrobe and Southern Alpine Resort Management Board (Mt Baw Baw).

Gippsland has a variable climate, typified by periods of wet and dry conditions. Gippsland has an estimated population of 271,269[2], with the principal population centres being Traralgon, Moe, Wonthaggi, Warragul, Morwell, Sale, Bairnsdale, Drouin, Leongatha, and Phillip Island. There are many more remote areas in Gippsland containing smaller, more isolated communities that are far away from regional centres.

Gippsland is best known for its primary production such as mining, power generation and farming as well as its tourist destinations that include – International events such as the Australian Motorcycle Grand Prix, held at Phillip Island, Wilsons Promontory, the Gippsland Lakes, historic Walhalla, the Baw Baw Plateau and the Strzelecki Ranges to name a few.

Tourism is an important industry for Gippsland. The region received over 5.4 million domestic (overnight and daytrip) and international overnight visitors combined, who spent an estimated $872 million in the year ending December 2017[3].

The Gippsland coastline is vulnerable to coastal inundation during significantly high tides in the event of a Tsunami.

Trenches most likely to generate a potential tsunami hazard that will impact the Gippsland coast.

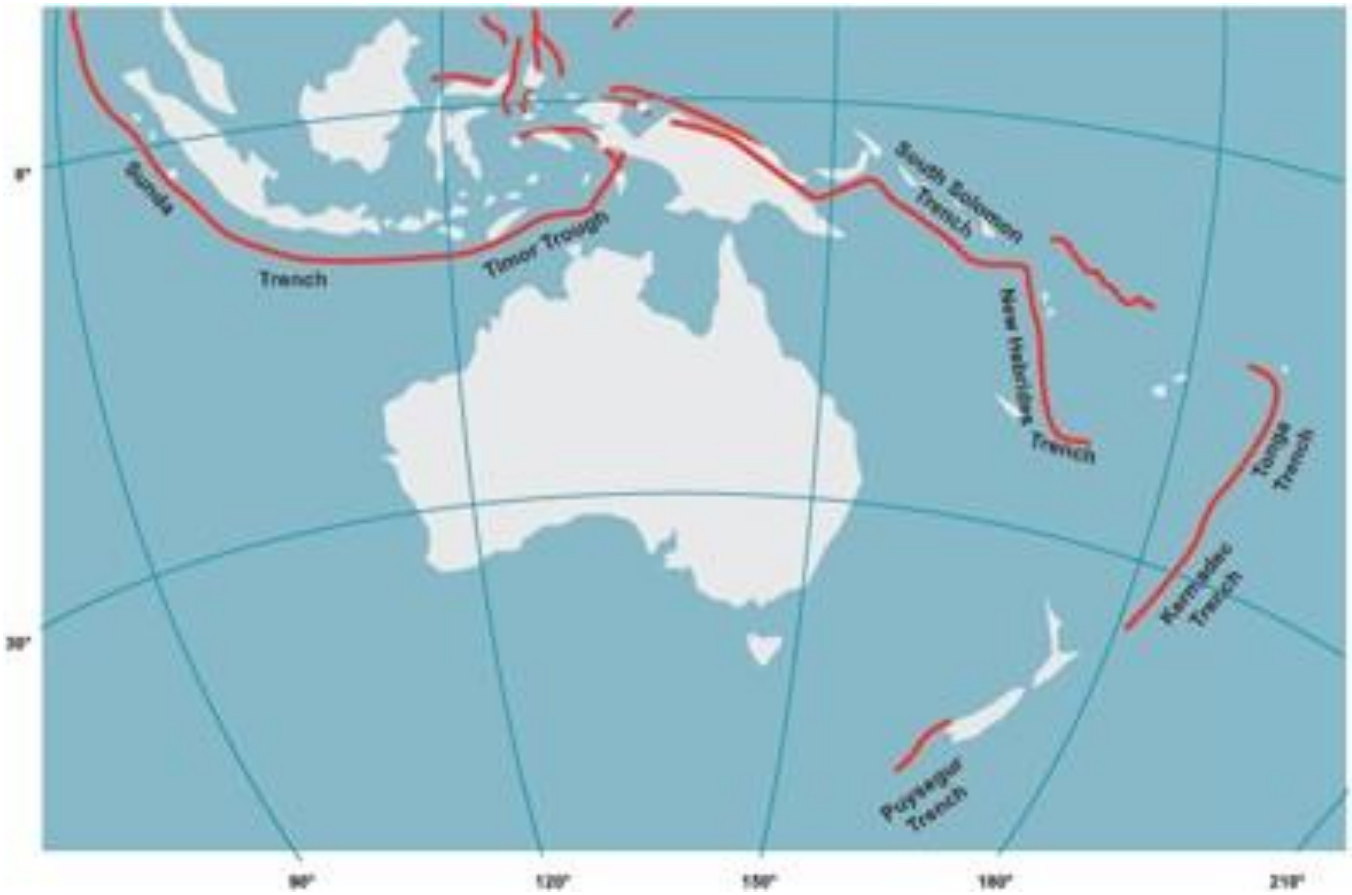
They are:

- Puysegur Trench in New Zealand
- New Hebrides Trench between New Caledonia and Vanuatu
- Kermadec Trench near Tonga

[1] Australian Bureau of Statistics (ABS), Census 2016 http://www.abs.gov.au/census.

[2] Australian Bureau of Statistics (ABS), Census 2016 http://www.abs.gov.au/census.

[3] Gippsland Regional Tourism Summary, Tourism Victoria, December 2017. http://www.business.vic.gov.au/__ data/assets/pdf_file/0010/1643779/Gippsland-Regional-Summary-year-ending-December-2017.pdf




The severity of impacts varies depending on factors including geomorphology, estuary characteristics and population and infrastructure inundated. In addition, the impact of individual meteorological events on flooding can vary due to precedent conditions and the direction and severity of weather conditions

A Tsunami during a peak tourist season could have major economic impacts and additional complications with vastly exceeded local populations. A Tsunami along the Gippsland coast will have long term on small coastal communities and impact to the natural environment through erosion.

### 2.2 The Tsunami Hazard

A tsunami is a series of ocean waves generated by a sudden displacement of large volumes of water. The impacts of a tsunami can vary widely. A small tsunami may result in unusual tides or currents that can be dangerous to swimmers or cause damage to berthed vessels. A large tsunami can cause widespread flooding and destruction. It may also cause strong rips and currents in oceans around the world for up to a few days after the initiating earthquake. A large tsunami in the Victorian context is considered a low probability but is a high consequence event. Smaller tsunami will occur more frequently but will likely only pose a risk to individuals and assets in or on water. A description of possible tsunami sources and the characteristics and effects of tsunami is given below.

Tsunami may be caused by any one or combination of the following:

- Vertical movement of the sea floor as a result of a large earthquake.
- Sub-marine or coastal volcanic eruptions.
- Meteor impacts.
- Coastal landslides and slumps, either land-based or sub-marine.

The size of tsunami can range from centimetres, resulting in strong and unusual currents, to tens of metres, causing the flooding of coastal land. Earthquakes have generated the majority of tsunami that have occurred in the Pacific Ocean and that have been recorded on the Australian coast. However, no clear relationship exists between earthquake intensity and tsunami magnitude. Not all earthquakes generate a tsunami. To generate a tsunami, the fault where the earthquake occurs must be underneath or near the ocean, and the earthquake must cause significant vertical movement of the sea floor over a large area. Shallow focus earthquakes along tectonic plate subduction zones are responsible for the most destructive tsunami.

Further detailed information about tsunami generation, sources and behaviour is contained in the **State Emergency Response Plan – Tsunami Complementary Plan**.

### 2.3 Characteristics of Tsunami

Tsunami are primarily characterised by their long wavelength, which can range from 10 to 500 kilometres long. Tsunami travel outward in all directions from their point of origin and can strike coastal areas at great distances from the source. Secondary tsunami larger Tsunami waves can arrive along the coastal areas up to 10 – 14 hours after the initial impact.

Tsunami can arrive with a leading crest or a leading trough. Tsunami may strike the coast as a cresting wave, a fast rising tide or a bore. At some locations, the advancing turbulent front will be the most destructive part of the wave. In other situations, the greatest damage will be caused by the outflow of water back to the sea, between successive tsunami waves.

Tsunami magnitude at the coast is dependent on the configuration of the coastline, the shape of the ocean floor, reflection of waves, tides and wind waves. Narrow bays, inlets and estuaries may cause funnelling effects that enhance tsunami magnitude. The combination of these factors means that the flooding produced by a tsunami can vary greatly from place to place over a short distance.

A tsunami is not one wave, but a series of waves. The time between the successive waves is usually between 5 and 90 minutes. Destructive waves may continue for a number of hours, and several days may pass before the sea returns to its normal state. The first wave in the series may not be the largest.

Tsunami can wrap around islands and damage can be worst on coasts on the lee-side that face away from the source of the tsunami. Tsunami impacting on harbours and bays can create damaging wave activity and currents. In these enclosed environments, maximum wave magnitudes may possibly occur somewhat later than the arrival of the initial wave. Even small tsunami can generate currents strong enough to cause damage to boats and associated facilities.

### 2.4 Warning Time

Warning time, and therefore warning arrangements, will vary depending on the proximity of tsunami generation, for example:

- An earthquake-generated tsunami along the Puysegur Trench in New Zealand may arrive approximately 2 hours after it was generated.
- An earthquake generated from the New Hebrides Trench between New Caledonia and Vanuatu may arrive approximately 5 hours after it was generated.
- An earthquake generated from the Kermadec Trench near Tonga may arrive approximately 6 hours after it was generated.
- A distant tsunami (e.g., in Chile, California or Alaska) may arrive over 12 hours after it has been generated.

- A local tsunami possibly caused by a submarine landslide may arrive at the initial point of impact along the Victorian coast within minutes. Under these circumstances, limited warning time may be available to adjacent coastal communities outside the initial impact area.

## 2.5 Regional Resources

VICSES Resource processes are set out in the '*VICSES Operations Management Manual*'.

Regional Resources remain under the command of the Regional Agency Commander until they arrive at the incident.

Key regional resources that are used for storm response include:

- Attachment 2 - VICSES Regional Resource List
- Attachment 3 - VICSES Unit Map
- Attachment 5 - VICSES ICC Footprint and clusters

Additional expert multi-agency resources may be accessed during operations through the Australasian Inter-Service Incident Management System (AIIMS) structure. These resources are requested via the State Resource Request System.

East (Gippsland) General Response Boundaries are accessible via Emergency Management – Common Operating Picture (EM-COP) for registered users.

# 3. Consequences

## 3.1 Possible Tsunami Consequences

The consequences of a tsunami will vary depending on its magnitude. Most tsunamis will be only small, resulting in strong currents and changing water levels over a period of time, which may affect marine based risk elements such as people on beaches, swimmers, boaters, divers, fishers, aqua-culture industries and sub-marine infrastructure (e.g. submarine cables).

Larger tsunamis that may inundate land are rare in the Victorian context. Damage from a large tsunami may result from:

- Inundation (or flash flooding).
- Wave and debris impact on structures, vehicle and pedestrians.
- Strong rips and currents with the potential for drowning and damage to small boats.
- Erosion.

Damage from large tsunami will impact marine based risk groups highlighted above as well as land-based risk groups including:

- People and property in caravan parks and camping areas in low-lying coastal areas or on floodplains in tidal river areas.
- Residential, commercial, and industrial buildings and their occupants in low-lying coastal areas or on floodplains in tidal river areas.
- Coastal infrastructure including ports, roads, bridges, power, water, gas, sewerage, and telecommunications.
- Motorists and vehicles along low-lying roads.
- Low-lying coastal farmland including animals and crops.
- Institutions such as schools and hospitals located in low-lying coastal areas.
- Walkers in coastal parks and reserves.

Significant community disruption can occur as a result of damage to infrastructure, which may lead to cascading secondary consequences. For example, a loss of power may result in a loss of telecommunications, traffic signals and disruption to supply chains amongst other impacts. Damage to coastal road infrastructure may result in isolation of properties and/or communities.

## 3.2 Tsunami History

There have been no recorded earthquakes in the in any of three key trenches (Puysegur, Kermadec or New Hebrides).

The table below provides information about historical earthquakes that has resulted in tsunamis occurring. The impacts to Australia and the Gippsland coast have been limited to higher than normal tide heights and stronger currents.

There have been a number of reports of tidal waves which are not included in the historical events.

| Year | Locality impacted | Description |
|---|---|---|
| **1960 – May 23**<br>**Chile Earthquake M9.5** | Wilson's Promontory | A magnitude 9.5 earthquake occurred approximately 100 miles off the coast of Chile.<br><br>Impacts on the coast of Australia were felt approximately 15 hours later with no noted damage.<br><br>Eyewitness accounts of this event describe the inundation of Three Mile beach at Wilsons Promontory, and unusually strong currents in the Lakes Entrance estuary |

# 4. Community Resilience

## 4.1 Shared and Individual Responsibility for Action

The National Strategy for Disaster Resilience and VICSES Community Resilience Strategy together provide high-level guidance on disaster management for our people, providing examples on how we can work together to build safer more resilient communities.

Together this can be done by building capacity, increasing collaboration, and fostering connections. The role of the community in disasters is based on individuals taking their share of the responsibility for preventing, preparing for, responding to, and recovering from disasters.

Foremost is the principle of all of society taking responsibility for preparing for disasters. Examples in the context of tsunami include:

- Individuals being aware of their tsunami risk, and following advice from emergency services when responding to warnings.
- Local governments and communities including tsunami risk within their Community Emergency Risk Assessment (CERA) activities.
- Industry and businesses planning for the risk of disruption, and ensuring arrangements are in place to maintain critical services, and assist communities where possible.
- Government agencies undertaking:
  - Risk assessments to gain an appreciation of tsunami risk
  - Engaging with the community regarding tsunami risk
  - Work with communities to plan the management of tsunami risk
  - Providing emergency information and tsunami warnings
  - Ensuring an effective, well-coordinated response during tsunami
  - Helping communities to recover and learn following a tsunami and to build their resilience to future events.

We therefore recognise the importance of working in partnership with communities. When communities play a role in their own safety, resilience is enhanced. The benefits of building community resilience and investing in disaster preparedness (disaster risk reduction – DRR) initiatives include:

- Safer communities
- Less demands on emergency services for assistance
- Less damage to property and infrastructure
- Speedier recovery
- Reduction in overall (impact and recovery) costs to the national economy
- Increase capacity and capability across the board

East (Gippsland) Region has developed and delivers a range of programs to achieve the goals outlines in the VICSES Community Resilience Strategy and delivers programs to at-risk communities to provide information on what to do before, during and after tsunami. Information can be found at https://www.ses.vic.gov.au/plan-and-stay-safe

## 4.2 Australian Tsunami Warning System

The official tsunami warning centre for Australia is the Joint Australian Tsunami Warning Centre (JATWC). The centre is operated by the Bureau of Meteorology and Geoscience Australia, and is responsible for issuing Tsunami Watches and Warnings for Australia including Victoria. These services are outlined in detail in the **State Emergency Response Plan – Tsunami Complementary Plan**:

- **National Tsunami No Threat Bulletin** – Issued when it has been determined that there is no threat of dangerous tsunami to the Australian mainland, islands or territories.
- **Tsunami Watch** – Issued when there is a possible tsunami threat after an undersea earthquake has been detected and analysed. The Tsunami Watch issued will be one of two categories:
  - **National Tsunami Watch** – issued in the context of Australian region
  - **Victorian Tsunami Watch** – issued in the context of Victoria only.
- **Tsunami Warning** – Issued when there is high degree of confidence that a tsunami threat exists based upon detection that a tsunami has been generated; or if the tsunami is less than 90 minutes away from a potential first point of impact. The Tsunami Warning issued will be one of two categories:
  - **Marine and Immediate Foreshore Threat** – The tsunami is expected to mainly affect the marine environment for specified coastal areas
  - **Land Inundation Threat** – Warnings for low lying coastal areas of major land flooding, dangerous waves and strong ocean currents.
- **National Tsunami Warning Summary** – Issued once separate Tsunami Watches or Warnings are issued for individual States and Territories, a National Tsunami Warning Summary will be issued listing all the watches, warnings and cancellations that are in effect for the current tsunami event. The JATWC website www.bom.gov.au/tsunami provides a complementary coastal threat graphic showing the regions currently under threat.
- **Tsunami Watch Cancellation or Tsunami Warning Cancellations** – Issued by the JATWC through the Bureau of Meteorology, in consultation with the Victoria State Emergency Service. Issued after confirmation that destructive impacts will not eventuate from a tsunami or after confirmation that a tsunami event has ended, and the coastal area is safe for emergency services to enter the impact area to commence immediate post-impact response operations.

## 4.3 Notification of Tsunami other than from Bureau of Meteorology

To maximise the opportunity for some warning following the initial impact of a locally generated tsunami such as a sub-marine or coastal landslide, for which there is no pre-impact notification via the Bureau of Meteorology, the following is to be undertaken:

- Local VICSES Units will report any tsunami impact through their relevant Victoria State Emergency Service Regional Duty Officer (RDO) who will then pass onto the State Duty Officer (SDO).
- Life Saving Victoria will notify the relevant Victoria State Emergency Service Regional Duty Officer (RDO) when unusual ocean behaviour, which may be indicative of an imminent tsunami or when a tsunami has occurred.
- Victoria Police will notify the Victoria State Emergency Service SDO of any information they receive indicating the impact of a tsunami (e.g. information received via calls to 000), including information from adjacent states.

- The Victoria State Emergency Service SDO will alert the Bureau of Meteorology to the impact of the tsunami. The Bureau of Meteorology will issue a Tsunami Warning to all Victorian coastal broadcast media and emergency services.

### 4.4 Municipal Tsunami Emergency Planning

Where tsunami is identified through the emergency risk management process as a priority risk to a community, the Victoria State Emergency Service will provide advice and support to the Municipal Emergency Management Planning Committee (MEMPC) to ensure the Municipal Emergency Management Plan (MEMP) contains, at a minimum, arrangements for the response to a tsunami event based on all-hazards and all-agency response.

### 4.5 Community Engagement

Community engagement programs to build community resilience for tsunami are conducted in accordance with the VICSES Community Resilience Strategy, as outlined in section 4.1 (Shared and Individual Responsibility for Action).

The East (Gippsland) Region community engagement Tsunami Awareness strategy involves, but is not limited to:

- Community Education Facilitator (CEF) courses conducted to equip volunteers with the required tools, skills and knowledge to build tsunami awareness in their local communities.
- Endorsed CEF's from across the region come together to form a Community Education Advisory Group (CEAG) where they support and share ideas on activities used to engage with their community.
- Regular unit activities and events to reinforce the tsunami event risk messaging.
- Participation in multi-agency activities including municipal tsunami education responsibilities.
- Participation in community led emergency planning.

Tsunami education resources have been developed by Victoria State Emergency Service and available to provide information on tsunami risk. These resources can be found at www.ses.vic.gov.au/plan-and-stay-safe/emergencies/tsunami.

### 4.6 Household and Business Plans

The VICSES advises that every household and business should have written emergency plans. Information on the development of household and business plans can be found at www.ses.vic.gov.au/plan-and-stay-safe.

### 4.7 Community Safety Advice

The Victoria State Emergency Service provides advice to community in the form of key safety messages for tsunami including advice for safe evacuation. A full list of community safety advice messages can be viewed online via EM-COP, located in the IMT Toolbox.

# 5. Managing a Tsunami Event

## 5.1 Roles and Responsibilities

Roles and responsibilities of agencies involved in responding to tsunami are detailed in the **State Emergency Response Plan – Tsunami Complementary Plan**.

## 5.2 Concept of Operations

The concept of operations is detailed in the **State Emergency Response Plan – Tsunami Complementary Plan**.

## 5.3 Escalation and Notification

The Bureau of Meteorology publishes Tsunami Watches and Warnings, as detailed in section 4.2 Australian Tsunami Warning System, on their public website www.bom.gov.au/tsunami and provides them to pre-identified agencies, organisations and media outlets, including pager and email warning messages to the Victoria State Emergency Service at the State and Regional Level.

Upon the receipt of a Tsunami Watch or Warning, Regional Duty Officer (RDOs) will acknowledge the pager message and notify the Regional Agency Commander (RAC) to notify the Regional Controller and/or Regional Emergency Management Team members for earthquake response, and any relevant Units. Activate this plan as required based upon the modelled threat.

The escalation and notification process for tsunami response is operationalised within the Victoria State Emergency Service *Standard Operating Procedure (SOP) 047 – Tsunami Notification and Activation Process*.

## 5.4 Strategic Response Planning

The actions listed below are the responsibility of the Victoria State Emergency Service at the regional and State tiers. Responsibility for these actions may transition to the Regional Controller to support multi-agency response when significant impacts caused by a tsunami event occur.

On the receipt of a Tsunami Watch or Warning from the Bureau of Meteorology the RAC will undertake strategic level planning in anticipation of an event. Key considerations will include:

- Establishing the control structure for managing the event.
- Supporting consistent emergency warnings and provision of information to the community.
- Implementation of evacuation and emergency relief plans and identification of evacuation points.
- Confirming agencies at all tiers are activating appropriate preparedness arrangements for the impending impact of a tsunami.
- Identifying the likely consequences of the tsunami impact and any interdependencies that may affect planning.
- Confirming agencies have adequate resources in place to fulfil their responsibilities and are planning for sustainment and surge capacity, including identification of need for inter-state or international assistance.
- Identifying mass gatherings and large public events that maybe at risk, and arrangements to ensure the safety of individuals attending.
- Pre-positioning resources to priority areas.
- Confirming agencies with call-taking responsibilities have resources in place and back up arrangements to cope with the expected call load.

- Positioning of Emergency Management Liaison Officers (EMLOs) from key support agencies to Regional Control Centres (RCCs), where appropriate.
- Arranging for regular meetings of the Regional Emergency Management Teams (REMTs) and Incident Emergency Management Teams (IEMTs).
- Providing situation reports to the State Control Team (SCT).

### 5.5 Cross Border Arrangements

For the East (Gippsland) Region, cross border arrangements exist with NSW SES, supported by a Memorandum of Understanding (MoU) that outlines how VICSES will request assistance from the NSW SES.

### 5.6 Regional Control Centre

The Region Response Plan will outline pre-determined facilitates that are suitable for the establishment of a Regional Control Centre for the management of emergency events, including for flood response, in East (Gippsland) Region. The only one in East (Gippsland) Region is:

**Gippsland Region**
Level 1, 181 Franklin Street, Traralgon, 3844
Phone: 03 5177 3240
Fax: 03 5177 3284
E: rccgip.all@rcc.vic.gov.au

### 5.7 Incident Control Centres

The Regional Response Plan will outline Incident Control Centre (ICC) locations that have been pre-determined for emergency response, including flood response, in the East (Gippsland) Region. The ICCs that are used for Tsunami response are detailed in table below.

The activation of the ICCs will be agreed by the Regional Controller and VICSES Regional Agency Controller (RAC), dependant on the location and scale of the storm event.

| Name | Agency | Location |
|---|---|---|
| Bairnsdale | DELWP | 574 Main Street, Bairnsdale |
| Traralgon | DELWP | Level 2, 181 Franklin Street, Traralgon |

A map of ICC footprints are available online via EM-COP - also attachment 5.

### 5.8 Divisional Command Points

VICSES has a number of facilities equipped as Divisional Command Points (DCPs), these are listed below and currently under review.

| Location | Address | Agency |
|---|---|---|
| Bairnsdale Unit | 189 Macleod Street, Bairnsdale | VICSES |
| Sale Unit | 35-37 Union Street, Sale | VICSES |
| Moe Unit | 265 Monash Road, Newborough | VICSES |
| Yarram Unit | Railway Avenue, Yarram | VICSES |

Further facilities suitable for use as DCPs for tsunamis are available from CFA. Local Command Facilities (LCFs) are equipped to DCP standard.

Where fixed Command and Control Facilities are not available or appropriate to operational conditions, a mobile facility may be deployed to enable an Incident Controller or Commander to manage the incident.

The Field Operation Vehicle (FOV) is a mobile facility which provides working space to support a base of operations including, Incident Control Point, Sector or Division Command Point. Refer to *SOP 069 Operation of Mobile Command Facilities (MCV/FOV).*

### 5.9 Regional Resource Requirements

Likely resource requirements for a tsunami event within ICC footprints are detailed in Attachment 2 - East (Gippsland) resource list.

Resources listed below are those that would be required at the peak of an event, and would represent the resources of all agencies with responsibilities under the **State Emergency Response Plan – Tsunami Complementary Plan**.

| Core capability | Human resources | Equipment available |
|---|---|---|
| Swift Water Rescue (in water) | Swift Water Rescue Team (SWRT) from VICPOL or FRV | |
| Aerial observations | Aircraft Officer and/or Air Observer | Drones or Rotary aircraft |
| Impact Assessment Teams | CFA & FRV | |
| Land Based Swift Water Teams | VICSES Members & Surf Lifesaving Victoria members | |

# Attachment 1 - Region Tsunami Scenario

A Region Tsunami Scenario has been developed to support periodic training requirements (outlined in section 1.8), provide opportunity to document anecdotal and/or known tsunami impacts based on historic events, and provide an indication of the resource requirements and associated gaps for operational response.

The below scenario is based on a likely tsunami scenario in the East (Gippsland) Region.

**Tsunami Scenario – Gippsland Puysegur trench 8.8 Mag**
In June at 3:00AM, a Tsunami Watch was issued by the Bureau of Meteorology (BoM) and subsequently broadcast by the State Duty Officer (SDO) to the East Region Duty Officer (ETDO).

*"TSUNAMI WATCH: BoM advises that an Earthquake of Magnitude 8.8 at 02.55 AM EST has occurred at Puysegur Trench in New Zealand resulting in the potential for a Tsunami wave. BoM that they are monitoring the situation and will advise once further information is available".*

At 3:20AM, a Tsunami Marine Warning and then Tsunami Land Warning messages were issued by the Bureau of Meteorology (BoM) and subsequently broadcast by the State Duty Officer (SDO) to the East Region Duty Officer (ETDO).

*"TSUNAMI MARINE WARNING: BoM advises that an Earthquake has occurred at Puysegur Trench in New Zealand resulting in the creation of a Tsunami wave. BoM has confirmed that a Tsunami wave has been created as a result of the 8.8 Mg Earthquake with the Gippsland Coast extending into south NSW likely to see sea levels rise by up to 1.5 metres along coastal areas and 0.4 metres inwards at Lakes Entrance in 90 minutes [Brief details from warning including prognosis].*

*"TSUNAMI LAND WARNING: BoM advises that an Earthquake has occurred at Puysegur Trench in New Zealand resulting in the creation of a Tsunami wave. BoM has confirmed that a Tsunami wave has been created as a result of the 8.8 Mg Earthquake with the Gippsland Coast likely to see sea levels rise by up to 1.5 metres along coastal areas and 0.2 metres inwards at Lakes Entrance in 90 minutes.*

There is currently Minor Flood Warning for the Lakes Entrance area with heavy rains predicted. High tide is due at 06:00.

**Considerations**

- Lakes Entrance will be experiencing road closures and impacts of minor floods to local streets.
- The arrival of the tsunami coincides with the rising tide and will impact near the predicted high tide.
- Likely impacts may result in near major flood levels similar to 1988 and 2007 floods.
- Water is travelling at approximately 20-30 km/h.
- Secondary significant waves are predicted 10 – 12 hours after initial impact.

**Resource Requirements**
The below resource requirements have been identified based upon the above tsunami scenario resulting in significant impacts across East (Gippsland) Coastal areas.

The scenario impacts the Gippsland Coastline from Wilson's Promontory to Mallacoota and the NSW Border. The scenario occurs during the winter months with local residents and limited tourists in the area and may impact a few thousand people and properties maybe threatened.

Resources listed are those that would be required at the peak of an event and would represent the resources of all agencies with responsibilities under the **State Emergency Response Plan – Tsunami Complementary Plan**.

The Traralgon RCC will be operational in this instance. Initial staffing as per rostered arrangements with all recallable staff being notified. Full REMT should be notified with key agencies in place at the RCC by request of the Region Controller.

**IMT Structure**
A Base IMT supported by State with Public Information and Warnings will be established and the IEMT should include representatives from municipalities (or a single representative from a municipality with connections to other municipalities in the ICC footprint), Vic Roads, Victoria Police (Traffic Manager and EMLO), Ambulance Victoria. EMLOs from other emergency services (in particular DELWP and CFA).

**DIV COM Structure**
ICPs located near Lakes Entrance utilising the FOV in the first instance with transition to Division Command points when the emergency activity within the division exceeds the capacity of the ICPs management structure, or at the direction of the Regional or Incident Controller (at the nominated readiness ICCs). ICPs should include an Incident Controller and cover the Operations Planning (including OIMS operators) and Logistics functions. Representatives from Shires and the CFA/DELWP may assist with ensuring appropriate resource use at the Division level).

**East Region Units**

All east (Gippsland) units will be notified of the threat via pager messages of the Tsunami threat.

Units identified as first responders are:

- Bairnsdale
- Bruthen
- Cann River
- Loch Sport
- Mallacoota
- Orbost
- Sale
- Yarram

**External Resources**

| External agency | Resources |
|---|---|
| CFA | Chain Saw Operators – Trim and cross cut |
| | Sand bag crews |
| | Ground observers – (Initial impact assessment) |
| | IMT roles |
| | Ladder Platform – Specialist Access |
| DELWP (see East Region Readiness and Response Plan – DELWP) | Chain saw operators / Tree fallers |
| | Sand bag crews |
| | IMT roles |
| Department of Health (DoH) | Recovery |
| Local Government | Chain saw operators / Arborists |
| | Plant |
| | Relief and recovery |
| | Traffic management |
| Victoria Police (VICPOL) | Traffic management |
| | Evacuation management |
| Vic ROADS | Chain saw operators / Arborists |
| | Traffic management |

## Attachment 2 – East (Gippsland) Region Resource list

The table below outlines the resources available for response held by East Region VICSES units.

See relevant MFEP for more detail and the VICSES Unit Map

| Unit Name | Primary Vehicle/s | Support Vehicle/s | 4WDs | Boats | Trailers | Lighting Towers |
|---|---|---|---|---|---|---|
| Bairnsdale | Primary Rescue (heavy) | Storm/ rescue support | 4WD x 2 | Rescue Boat – 5.0 Gemini RIB<br><br>Rescue Boat – 4.7 Jabiru | Storm Trailer | N/A |
| Bruthen | Ranger 4WD | Storm/ rescue support | 4WD x 1 | N/A | Storm Trailer | Light Tower |
| Bendoc | Primary Rescue (Medium) | Storm/ rescue support | 4WD | N/A | N/A | N/A |
| Buchan | Primary Rescue (6-wheel drive medium) | Storm/ rescue support | 4WD | N/A | Storm Trailer – (Due Mid 2018 | N/A |
| Cann River | Primary Rescue (Medium) | Storm/ Rescue Support | 4WD x2 | Rescue Boat – 3.8 Quicksilver IRB (Inflatable Rigid Hull) | N/A | Light Tower |
| Erica | 4WD | Storm/ Rescue Support | 4WD | N/A | Storm Trailer | Light Tower |
| Foster | Primary Rescue (Medium) | Storm/ Rescue Support | 4WD x2 | Rescue Boat – 5.0 Zodiac RHIB (Rigid Hull Inflatable Boat) | Storm Trailer | Light Tower |
| Inverloch | 4WD Twin cab ute | Medium truck to tow boat | 4WD | Off Shore Rescue Boat 8.0 Stabicraft & Rescue Boat – 5.0 Zodiac RHIB (Rigid Hull Inflatable Boat) | N/A | N/A |
| Leongatha | Primary Rescue (Heavy) | Storm/ Rescue Support | 4WD x 2 | N/A | N/A | Light Tower |

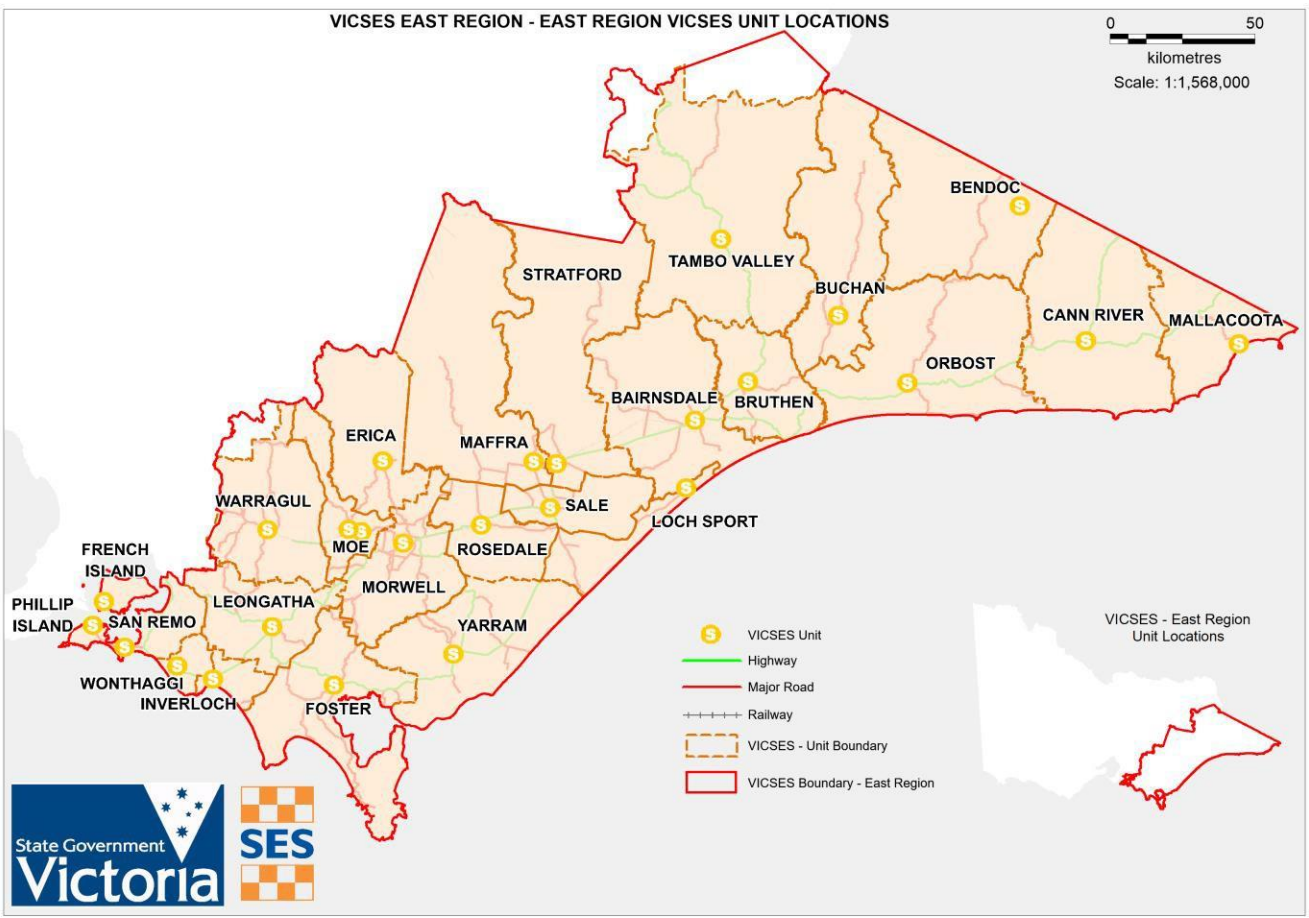
| Unit Name | Primary Vehicle(s) | Support Vehicle(s) | 4WD's | Boats | Trailers | Storm Trailers |
|---|---|---|---|---|---|---|
| Loch Sport | Ranger 4WD | Storm/ Rescue Support | 4WD x 1 | Rescue Boat – 5.0 Gemini RIB | Storm Trailer | N/A |
| Maffra | Primary Rescue (6-wheel drive Medium) | Storm/ Rescue Support | 4WD x 2 | N/A | Storm Trailer | N/A |
| Mallacoota | Primary Rescue (Medium) | Storm/ Rescue Support | 4WD | Rescue Boat – 4.7 Jabiru<br>Rescue Boat – 4.0 Zodiac IRB<br>IRB (Inflatable Rigid Hull) | N/A | N/A |
| Moe | Primary Rescue (Medium) | Storm/ Rescue Support | 4WD x 2 | Rescue Boat – 4.2 Gemini RIB | Storm Trailer | N/A |
| Morwell | Primary Rescue (Heavy) | Storm/ Rescue Support | 4WD | Rescue Boat – 5.2 Jabiru<br>&<br>Rescue Boat – 5.0 Gemini RIB | N/A | Light Tower |
| Traralgon (Morwell satellite) | Primary Rescue (Heavy) | Storm/ Rescue Support | 4WD | N/A | Storm Trailer | N/A |
| Orbost | Primary Rescue (Heavy) | Storm/ Rescue Support | 4WD | Rescue Boat – 4.7 Jabiru | Storm Trailer | N/A |
| Phillip Island | Primary Rescue (Heavy) | Storm/ Rescue support | 4WD | N/A | Storm Trailer | N/A |
| Rosedale | Primary Rescue (Heavy) | Storm/ Rescue Support | 4WD | N/A | Storm Trailer | Light Tower |
| Sale | Primary Rescue (Heavy) | Storm/ Rescue Support | 4WD x 2 | Rescue Boat – 5.0 Zodiac RHIB (Rigid Hull Inflatable Boat) | Storm Trailer | N/A |
| San Remo | Primary Rescue (Heavy) | Storm/ Rescue Support | 4WD | N/A | N/A | N/A |

# Attachment 3 – SES East (Gippsland) – Unit Map

VICSES Units within East (Gippsland) Region include:

- Bairnsdale
- Bendoc
- Bruthen
- Buchan
- East RECC Unit
- East RHQ Support RSU
- Erica
- Foster
- Inverloch
- Leongatha
- Loch Sport
- Maffra
- Mallacoota
- Moe
- Morwell
- Orbost
- Phillip Island
- Sale
- San Remo
- Stratford
- Tambo Valley
- Warragul
- Wonthaggi
- Yarram

A map of VICSES Units within the East (Gippsland) Region is provided below. Further details are available for registered users of EM COP.



# Attachment 4 – East (Gippsland) Unit List

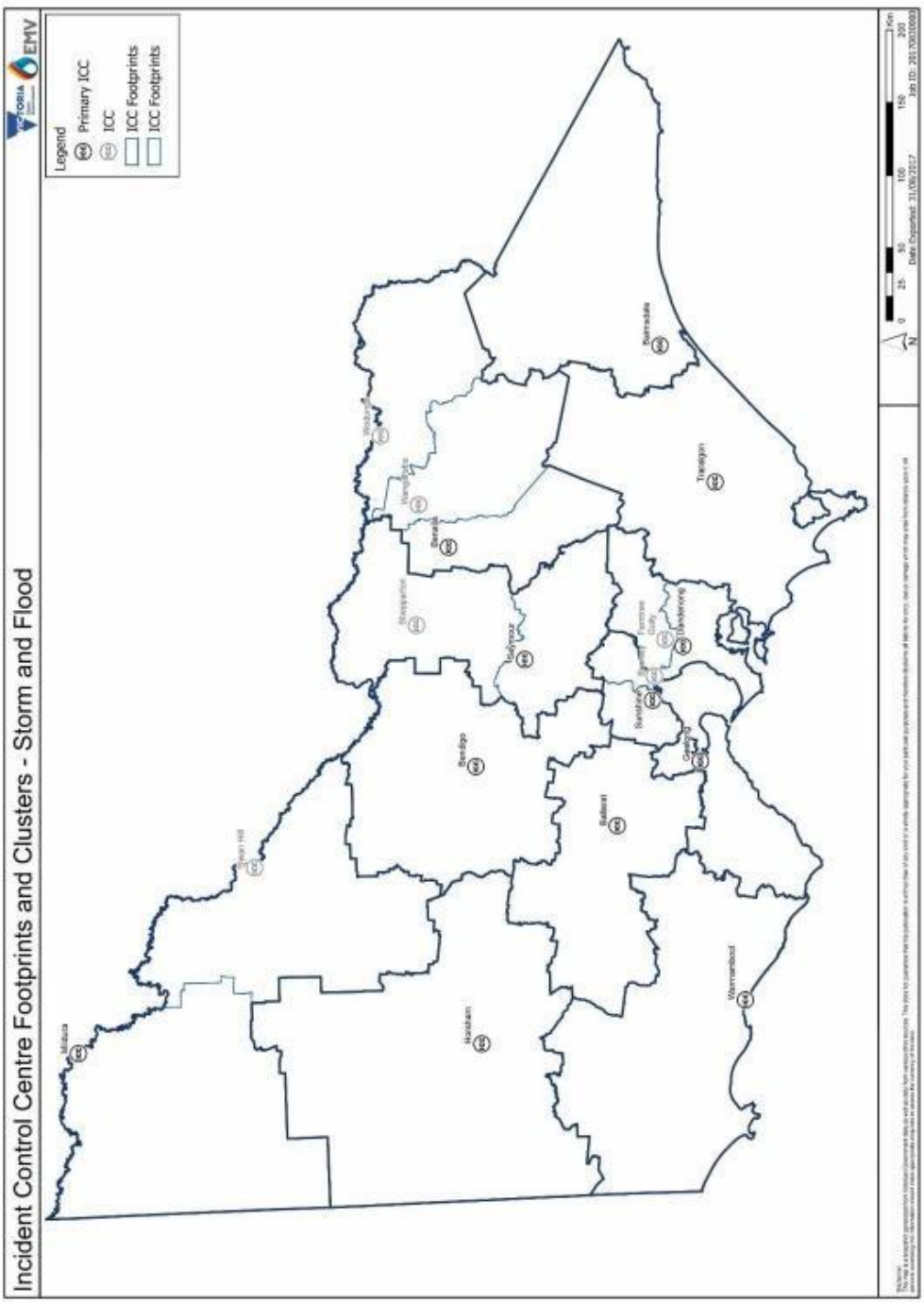
**EAS - Contact number 1800 609 511**

| Unit name | Addres s | Paging Number |
|---|---|---|
| Bairnsdale | 189 McLeod Street, Bairnsdale Vic. 3875 | 30095 |
| Bendoc | Corner James & Nichol Streets, Bendoc Vic. 3888 | 30099 |
| Bruthen | 51 Main Street, Bruthen Vic. 3885 | 30101 |
| Buchan | 32 Main Street. Buchan Vic. 3885 | 30103 |
| Cann River | 29 Monaro Hwy, Cann River Vic. 3890 | 30105 |
| Erica | 1A Lehman Court, Rawson Vic. 3825 | 30109 |
| Foster | 14 Pioneer Street, Foster Vic. 3960 | 30111 |
| Inverloch | 23 Bear Street, Inverloch Vic. 3996 | 30113 |
| Leongatha | 12 Watson Road, Leongatha Vic. 3953 | 30115 |
| Loch Sport | 105 National Parks Drive, Loch Sport 3851 | 30117 |
| Maffra | 90 Landy Street, Maffra Vic. 3860 | 30119 |
| Mallacoota | Lees Road, Mallacoota Vic. 3892 | 30121 |
| Moe | 265 Monash Road, Moe Vic. 3825 | 30123 |
| Morwell | 75 Airfield Road, Traralgon West Vic. 3844 | 30125 |
| Orbost | 5 Wolseley Street, Orbost Vic. 3888 | 30127 |
| Phillip Island | 125/127 Settlement Road, Cowes Vic. 3922 | 30129 |
| Rosedale | 47 Cansick Street, Rosedale Vic. 3847 | 30131 |
| Sale | 37 Union Street, Sale Vic. 3850 | 30133 |
| San Remo | 14 Davis Point Road, San Remo Vic. 3925 | 30135 |
| Stratford | 53 Mac Farlane Street, Stratford Vic. 3862 | 30137 |
| Tambo Valley | 6870 Great Alpine Road, Swifts Creek Vic. 3896 | 30139 |
| Warragul | 160 Queen Street, Warragul Vic. 3820 | 30141 |
| Wonthaggi | 319 White Street, South Dudley Vic. 3995 | 30143 |
| Yarram | Railway Ave, Yarram Vic. 3971 | 30145 |

## Attachment 5 – ICC Footprints

### Schedule 4

**ICC Footprint and Clusters – Flood and Storm**

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# Attachment 6 – Agency Contact Details

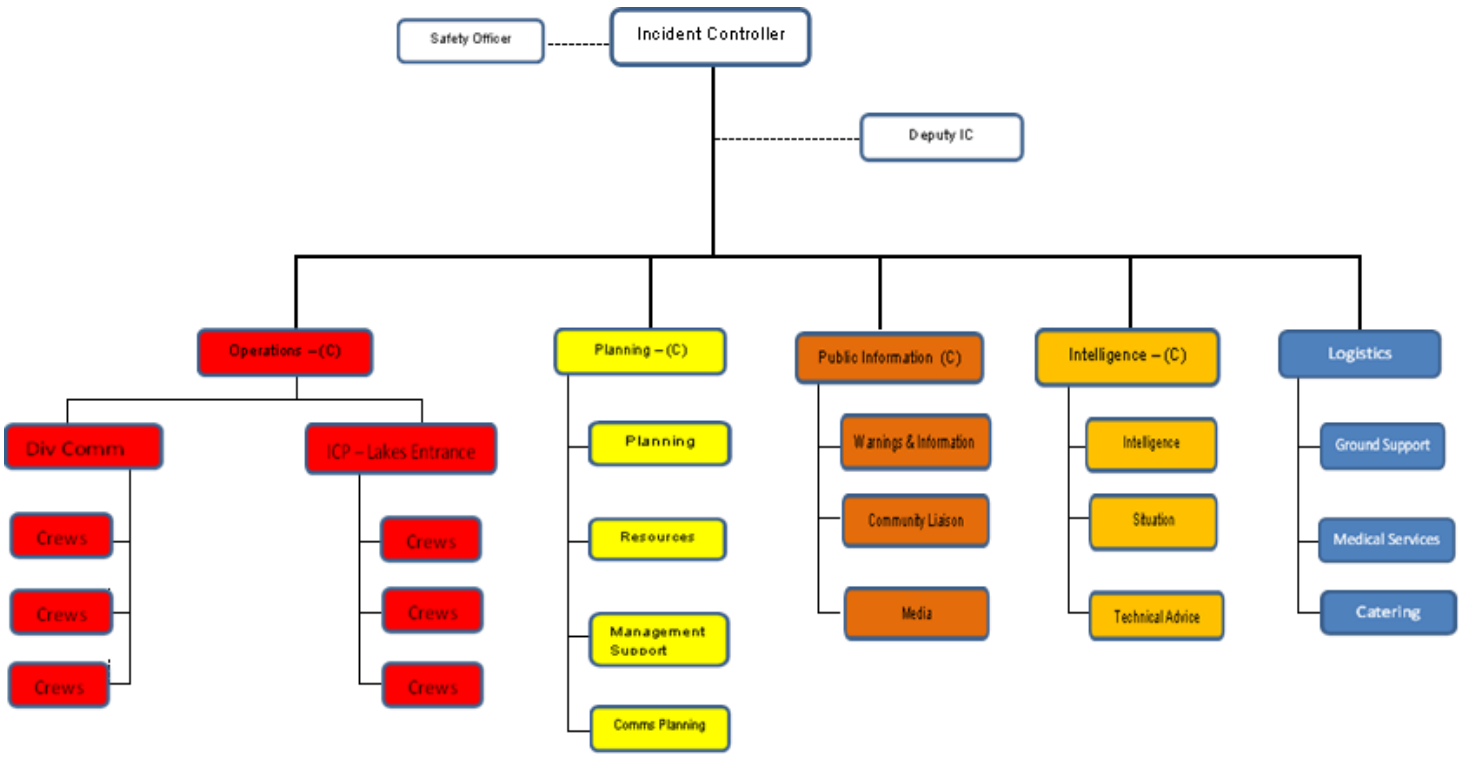
**Emergency Management Contacts**
Refer to EM-COP - Gippsland Contact Directory

**VICSES Contacts**
Refer to East (Gippsland) Unit Profiles

| Other useful contacts | | | |
|---|---|---|---|
| Business | Details | Phone | Fax |
| ABC | Emergency Hotline (Radio Master Control) | 1300 737 102 | |
| Ambulance | Medical emergency | 000 | |
| AUSLAN | To book an interpreter service 1300 AUSLAN or book online https://auslanservices.com/ | 1300 287 526 | |
| Country Fire Authority (CFA) | Fire | 000 | |
| Agriculture Victoria | Emergency Animal Disease Watch Hotline | 1800 675 888 | |
| Agriculture Victoria | Exotic plant pest hotline | 1800 084 881 | |
| Department of Education & Training (DET) | Emergency Duty Officer | 1300 333 232 | 1300 DEECD 2 |
| Department of Environment, Land, Water and Planning (DELWP) | Customer Service Centre | 13 61 86 | |
| Energy Safe Victoria | Electrical Emergencies | 1800 000 922 | |
| Energy Safe Victoria | Gas Emergencies | 132 771 | |
| Environment Protection Authority (EPA) | Pollution Hotline | 1300 372 842 | |
| Emergency Services Telecommunications Authority (ESTA) | emergency call-taking and dispatch | 03 8656 1200 | |
| Fire Rescue Victoria (FRV) | Fire | 000 | |
| Victorian Poisons Information Centre (VPIC) | Poisons information helpline | 13 11 26 (000 in an emergency) | |
| Victoria Police | Emergency | 000 131444 | |
| Public Transport Victoria (PTV) | Crisis and Emergency Response | 03 9027 4241 | 03 9027 4011 (facsimile) |
| Lifesaving Victoria (LSV) | General Enquiries and Life Saving Operations | General: 03 9676 6900 Operations 03 9676 6930 (000 in an emergency) | |
| Transport Safety Victoria | Incident Reporting - passenger transport | Rail Melbourne: | |

| | | | |
|---|---|---|---|
| | and boating | 1800 318 244<br>Bus:<br>1800 301 151<br>Maritime:<br>1800 135 729 | |
| Victorian Bushfire Information Line (VBIL) | VicEmergency Hotline | 1800 226 226 | |
| VicFish | Fisheries Offences | 13 FISH | 13 3474 |
| VLine / VicRail | 24/7 Duty Officer | 188 800 007 | |
| VicRoads | Emergencies and Road Closures | 131 170 | |
| VICSES Requests for assistance | Flood or Storm | 132 500 | |
| VICSES | Life Threatening | 000 | |
| VICSES Media | Media enquiries and support | 1300 783 933 | |
| VICSES | Emergency Information Line | 1300 842 737 | |
| Worksafe | Incident Notification | 13 23 60 | |
| VicEmergency | VicEmergency Hotline | 1800 226 226 | |

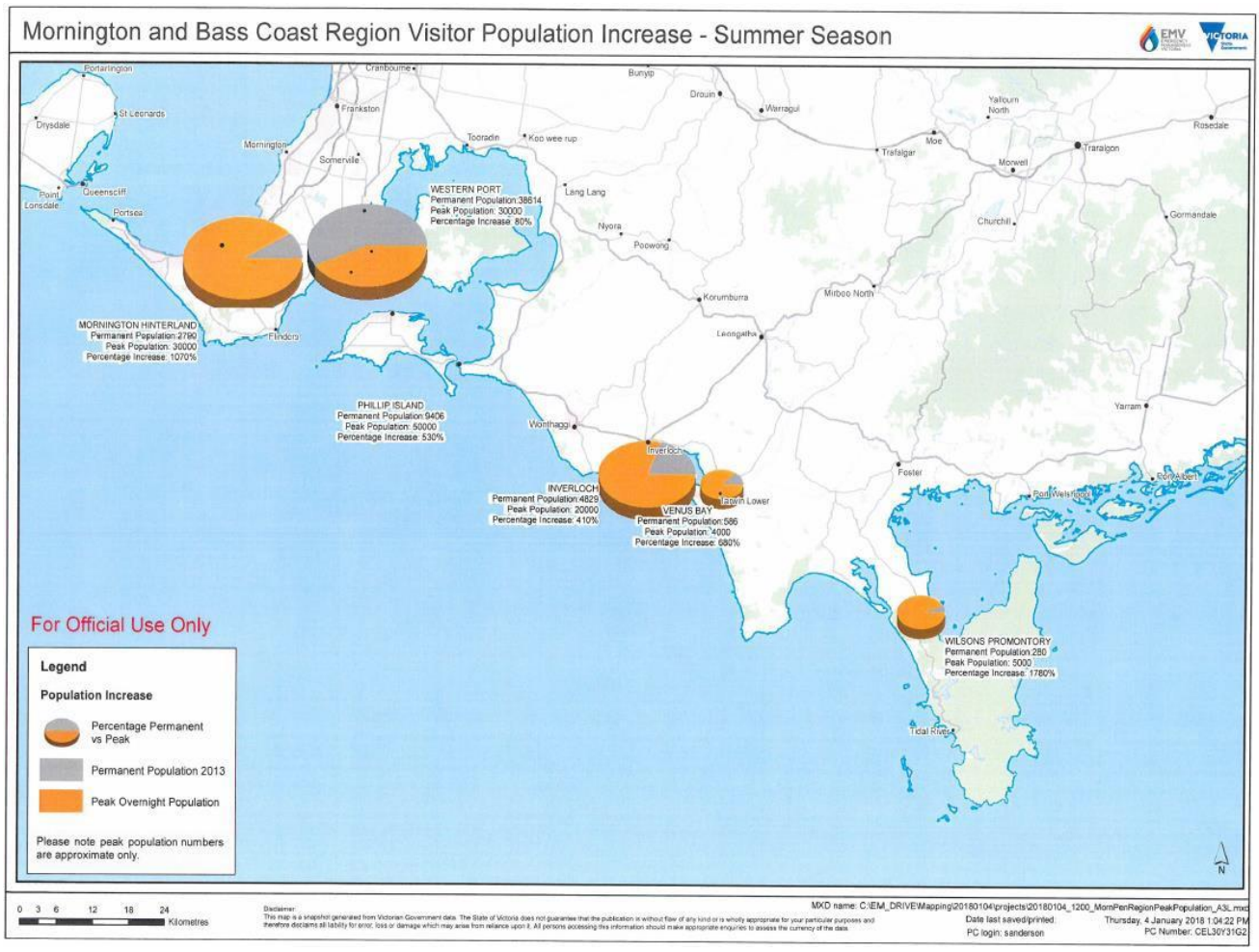
# Attachment 7 – Bairnsdale ICC - Expanded



# Attachment 8 – JSOP and VICSES List

| Tsunami Related<br>Joint Standard Operating Procedures (JSOPS) and VICSES Standard Operating Procedures (SOP)S | |
|---|---|
| JSOP 3.02 | Incident Naming – Major Emergencies |
| JSOP 3.03 | Incident Action Planning |
| JSOP 3.11 | Red Flag Warnings |
| JSOP 4.01 | Public Information and Warnings |
| JSOP 8.02 | Dynamic Risk Assessment |
| SOP 003 | Fatigue Management and Duty Time limitations |
| SOP 004 | Incident Notification Procedure |
| SOP 005 | Worksafe Notifiable Incident |
| SOP 006 | Out of Area Operations |
| SOP 015 | Operational Assistance to other Agencies |
| SOP 019 | Operations Involving Trees |
| SOP 024 | Operations Involving Power lines and Conductors |
| SOP 025 | Assistance to Victoria Police |
| SOP 026 | Personal Protective Clothing and Equipment for Operations |
| SOP 027 | Use of Utility Type Vehicles (UTV) |
| SOP 028 | VICSES Vehicles Entering Flood Water |
| SOP 030 | Operations Involving Hazardous Materials |
| SOP 031 | Use of Standard Emergency Warning Signal (SEWS) |
| SOP 035 | Entering Landor Premises During Operations |
| SOP 040 | Use of Hydration Drinks and Emergency Rations |
| SOP 043 | Hostile Acts |
| SOP 047 | Tsunami Notification and Activation Process |
| SOP 048 | State Specialised Resources (SSR) |
| SOP 053 | Rescue Boat Operations – Flood Incidents |
| SOP 054 | Deployment of Rescue Boat Taskforces |
| SOP 055 | Rescue Boat Operations – Marine Search and Rescue |
| SOP 059 | Safety Officers |
| SOP 061 | Access to Technical Specialists During Operation |
| SOP 069 | Operation of Mobile Command Facilities |

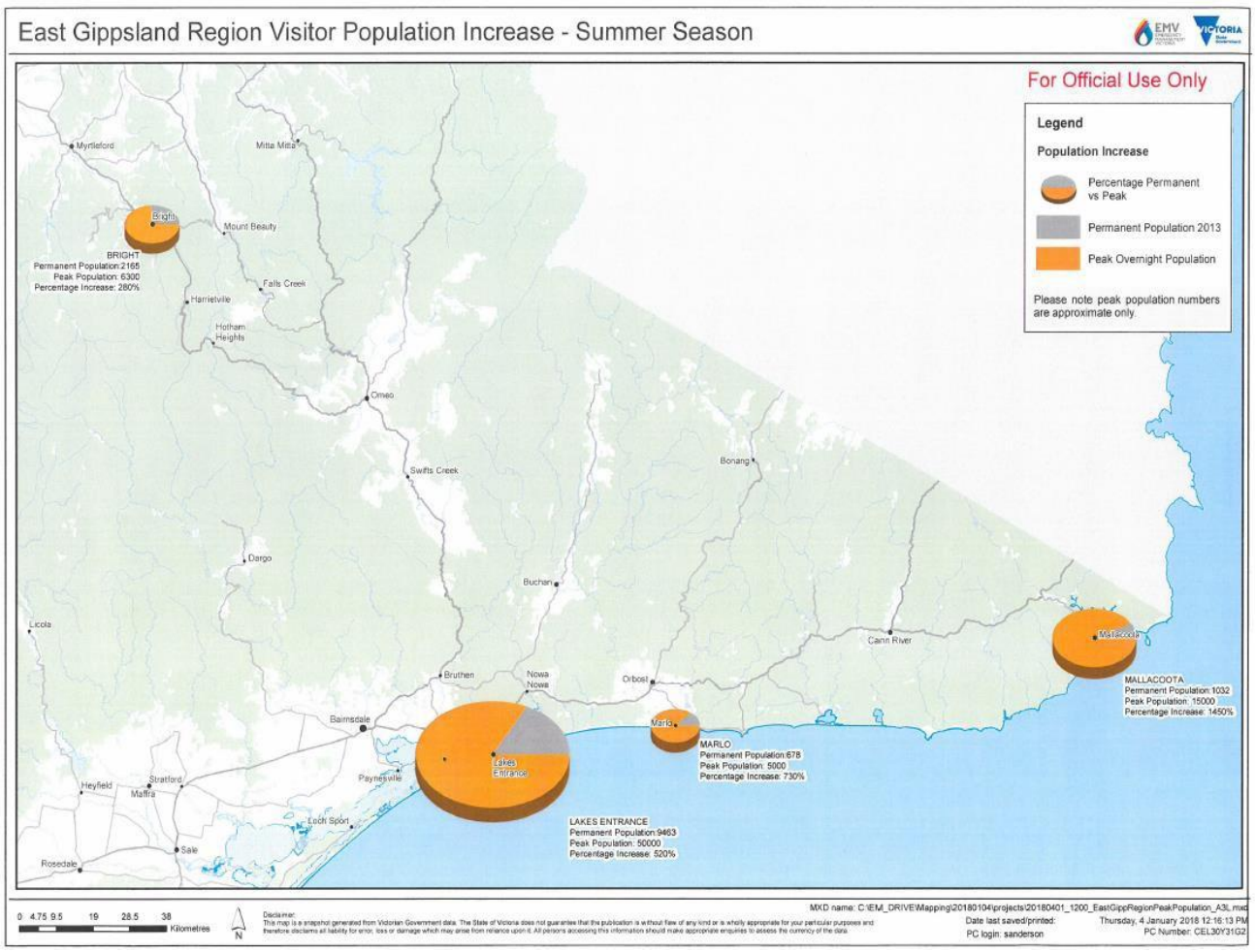
# Attachment 9 – Mornington and Bass coast summer population increase




There have been minimal recorded impacts of tsunamis to the Bass Coast and South Gippsland areas. It should be noted that there is significant increase in visitor populations during the summer period.

The impacts of tsunamis modelled for this area show sea level fluctuations of less than 1 metre. Notification periods range from 2 hours to 6 hours for the first impacts.

# Attachment 10 – East Gippsland coast summer population increase




There have been minimal recorded impacts of Tsunamis to the East Gippsland areas. It should be noted that there is significant increase in visitor populations during the summer period to both Lakes Entrance and Mallacoota. These two locations are likely to be impacted from a significant tsunami event.

The impacts of tsunamis modelled for this area show sea level fluctuations of less than 1 -1.5 metres on the coast line with decreasing sea level rises inside of Lakes Entrance of between 30-45 cm.

Notification periods range from 2 hours to 6 hours for the first impacts with secondary impacts following in 10-12 hours

# Attachment 11 – Key Public Messages

Refer to the *Key messages for VICSES hazards* manual and social media tiles available on the HUB. Also refer to the VICSES website: www.ses.vic.gov.au/plan-and-stay-safe/emergencies/tsunami.

**Before and During – Marine Threat**

- Stay informed – monitor emergency warnings issued by the Joint Australian Tsunami Warning Centre, through the VicEmergency app, website and hotline (1800 226 226) and by listening to emergency broadcasters such as ABC local radio, designated commercial radio stations and TV news stations.
- Call **132 500** for emergency assistance from VICSES.
- Call **Triple Zero (000)** in life threatening emergencies.
- If you are in the water:
  - Get out of the water and move far away from the edge of harbours, beaches, estuaries and rock platforms.
  - Boats in harbours, estuaries and in shallow coastal water should return to shore - secure your boat and move away from the waterfront.
  - Move any vessels already in deep water well offshore and remain there until further notice.
- If you are on land:
  - Move to higher ground away from the coast - at least one kilometre away from all beaches and harbours.
  - Do not go to the coast or headlands to watch the tsunami.
- Marine threat tsunamis are likely to cause:
  - Dangerous waves.
  - Strong ocean currents and rips.
  - Flooding in low-lying coastal areas, including coastal streams.
  - Damage to marine facilities and boats.
  - Overtopping of sea walls.
  - Significant sea level variations for hours or days.
- Check that your neighbours have received the advice.

**Before and During – Land Threat**

- Stay informed – monitor emergency warnings issued by the Joint Australian Tsunami Warning Centre, through the VicEmergency app, website and hotline (1800 226 226) and by listening to emergency broadcasters such as ABC local radio, designated commercial radio stations and TV news stations.
- Call **132 500** for emergency assistance from VICSES.
- Call **Triple Zero (000)** in life threatening emergencies.
- If you are in the water:
  - Get out of the water and move to higher ground, away from the coast.
  - Return all boats to shore, secure them, and move to higher ground away from the coast.
  - If you are already on a vessel in deep water, be prepared to stay offshore and remain there until further notice.
- If you are on land:
  - Move to higher ground immediately, at least 10 metres above sea level.
  - If possible, move at least one kilometre away from all beaches, harbours and estuaries.
  - If you cannot leave the area, take shelter as high as possible in a sturdy brick or concrete multi-storey building.
  - Do not go to the coast or headlands to watch the tsunami.
  - Take only essential items that you can carry including important papers, family photographs and medical needs.
  - If possible, walk to safety to avoid traffic jams.
- Land threat tsunamis are likely to cause:
  - Extreme danger to low-lying coastal areas.

- Overtopping of foreshore dunes and sea walls.
- Flooding beyond the immediate foreshore.
- Damage to ports, marina and small boats.
- Damage to buildings and infrastructure near the shore.
- Extremely dangerous ocean conditions for hours or days.

- Check that your neighbours have received the advice.

**After a tsunami**

- Hazardous conditions caused by the tsunami may remain for days.
- Extremely dangerous ocean conditions could last for hours or days after the tsunami.
- Stay safe by avoiding dangerous hazards such as floodwater mud, debris, damaged roads, and fallen and damaged trees and powerlines, which may still be present.
- Stay informed – monitor emergency warnings issued by the Joint Australian Tsunami Warning Centre, through the VicEmergency app, website and hotline (1800 226 226) and by listening to emergency broadcasters such as ABC local radio, designated commercial radio stations and TV news stations.
- Call **132 500** for emergency assistance from VICSES.
- Call **Triple Zero (000)** in life threatening emergencies.
- Drive slowly, obey all road signs, and never drive through floodwater. It can take just 15cm of water to float a car.
- Do not enter damaged or flooded buildings until authorities advise it is safe to do so.
- If your home has been flooded have all utilities, such as gas and electricity, professionally tested before use.
- When cleaning, protect your health and safety. Wear strong boots, gloves and protective clothing and wash your hands and clothes regularly.